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THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States,
issued on the first of each month from March to November, inclusive.

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Number 7

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR AUGUST, 1926

The reports of the fall Hessian fly surveys are now being received. The New York survey indicates an increase in infestation from 1.5 per cent in 1925 to 3.6 per cent this year. In Ohio the infestation remains about the same as in 1925, being this year 8.8 per cent and last year 7.5 per cent. In Illinois the fly is less prevalent than in 1925, except in the northern and northwestern counties.

In addition to the States reporting green-bug infestation in the last number of the Survey Bulletin, reports were received from Wisconsin and Iowa. This makes the outbreak cover practically the entire upper Mississippi and Ohio River Valleys.

The joint worm is reported for the first time from the northwest, an area about 12 miles square in Clatsamas and Marion Counties, Oregon, being very heavily infested. Inasmuch as stubble from this general region has been examined every year for the past 8 years, in connection with Hessian-fly work, this pest is undoubtedly new to this region.

Another unusual northern extension of insect damage was the serious outbreak of Diatraea zeacolella Dyar in a restricted region about Racine, Wis.

The alfalfa weevil has been found in four new counties in Colorado, and in Carbon and Goshen Counties, Wyo.

The codling moth is reported as decidedly more serious than usual in the East-Central and Southeastern States even under good spraying practices.

The plum curculio is reported as decidedly less troublesome than usual in Georgia and Illinois.

The black vine weevil has been found for the first time in southern California, and Anthrenus glochinella Zell. is recorded for the first time from San Diego County, Calif., where it was attacking tomatoes.

The cabbage maggot is reported as generally serious in the East-Central States, reports having been received from Indiana, Wisconsin, and Iowa.

The distribution of the Mexican bean beetle has very materially increased during the present year. It is reported for the first time in the State of Maryland in Garrett County, the westernmost county in the State. In Virginia it has extended eastward to Albemarle and Pittsylvania Counties, so that it now covers the western half of that State. In North Carolina it has reached the center of the State in Caswell County, and in Ohio the extension along the Lake is now complete and the insect in Indiana has spread westward to

Clinton County. The movement of this insect continues to be in general northward and northeastward.

The pepper weevil is now one of the most important pests in the pepper-growing sections of Orange County, Calif. There losses run as high as 50 to 65 per cent of the crop. This is a very material loss, as approximately 8,000 acres of peppers are being grown in this county this year.

In general the boll-weevil situation is not serious. The greatest damage is reported from Louisiana, Mississippi, and southern Alabama.

The cotton flea hopper outbreak reported in the last number of the Survey Bulletin has now practically terminated.

The cotton leaf worm is quite general throughout the central and western States of the cotton belt, considerable defoliation being reported from most of these States. Very considerable dusting is under way in a number of sections.

The cotton boll worm is reported as doing unusual damage throughout the cotton belt. Reports have been received from North Carolina, Alabama, Oklahoma, and Texas.

The report of the periodical cicada, from Doniphan County, Kans., which appeared in the July 1st number of the Survey Bulletin (Volume 6, page 128) has been confirmed by specimens determined by W. I. Mcatee as Tibicina septendecim var. cassinii Fisher.

The bagworm is quite generally reported from the East-Central and Southeastern States.

The hemlock spanworm is again seriously infesting hemlock and balsam fir in Wisconsin. An interesting account of the control of this pest with airplane dusting is recorded in this number of the Bulletin.

A very severe outbreak of the stable fly occurred throughout the grain belt of northern Texas and southern Oklahoma. It is believed to be the most severe outbreak since the unprecedented conditions in 1912. During the height of this outbreak dairymen recorded a reduction in milk flow of from 5 to 60 per cent. Farm work was discontinued and meat animals were rushed to market on account of loss of weight. As was the case in the previous severe outbreak, a large grain crop, with a production of a surplus of straw, followed by wet weather which brought about conditions favorable for breeding in the straw stacks is believed to be responsible for this outbreak.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR AUGUST, 1926

The wheat stem sawfly is infesting wheat from 1 to 50 per cent all over southwestern Manitoba, but is only serious where the crop has been allowed to become quite ripe before cutting. It is also widespread

in the Drumheller area in south-central Alberta, and has caused unusually heavy damage in southern Saskatchewan.

The lesser migratory grasshopper is on the increase in the Lomond-Retlaw section, Alberta, and may cause trouble next year. Two years ago an outbreak was wiped out in the same area.

The Colorado potato beetle is much more numerous in southern Quebec, south of the St. Lawrence river, than for several years.

A heavy infestation of the red turnip beetle is reported over a considerable area about Prince Albert, Saskatchewan.

The beet webworm has been noted in unusual numbers in north-central Saskatchewan and in southern Alberta.

The onion maggot is reported as severe in the Muskoka district, Ontario.

An outbreak of the spruce budworm is under investigation in east-central British Columbia, in the Barkerville district.

The lilac leaf-miner has been taken for the first time in Vancouver, British Columbia.

The poplar and willow borer is destroying many trees in the Kelowna district, British Columbia.

Fruit-moth larvae are more serious on apple in some sections of southern Quebec than for many years, and they appear to be on the increase.

The potato leafhopper is very abundant on young apple trees in the Niagara district, Ontario.

The plum curculio and the apple curculio have been responsible for much injury in southern Quebec. In southern Ontario, the former species is somewhat more prevalent on peaches than usual.

The rosy aphid and the green apple aphid have been of very minor importance in Ontario orchards this year.

The currant fruit fly has been reported infesting currants fairly heavily in several sections of southern Saskatchewan, indicating a wide territory infested.

The apple maggot is severe in many sections of southern Quebec.

The blackberry leaf-miner is prevalent and injurious in the Niagara district, Ontario.

The second brood of the codling moth in southern Ontario is a small one.

The nose botfly, the chimney and the horse botfly have been severe pests in southern Saskatchewan, the first named species having been particularly troublesome.

GENERAL FEEDERS

THE ANOMALIA (Anomala orientalis Waterh.)

Connecticut W. E. Britton (August 24): Adults have now about disappeared for the season at New Haven, and eggs and young larvae are found in the soil.

GRASSHOPPERS (Acridiidae)

Ohio E. W. Mendenhall (August 10): Grasshoppers are in abundance in all parts of the State, and I find considerable damage done by them in nurseries in southwestern part of Ohio.

Indiana C. R. Cleveland (August 24): Considerable complaint has been received of grasshoppers becoming increasingly abundant and injurious during the past month. They have been especially troublesome to flowers of various kinds, especially dahlias; truck crops, clover, and alfalfa have also been mentioned among the list of crops seriously injured.

Illinois W. P. Flint (August 23): Grasshoppers are abundant in few of the counties but are generally more numerous than in the summer of 1925 at Urbana.

Wisconsin S. B. Fracker (August 15): The reports of volunteer observers indicate almost no damage, with the possible exception of a little injury to tobacco in Dane County.

Nebraska M. H. Sweak (August 16): Injuries by grasshoppers, Melanoplus sp., continue to be severe in the alfalfa fields of Buffalo and Dawson Counties, and in the latter county a poisoning campaign under the direction of the county agent was resorted to during the last week in July.

Missouri L. Hoesman (August 27): Following the hay harvest, grasshoppers in many parts of the State caused serious injury to corn along the edges of fields and to young fruit trees and vineyards. However, there has not been a general epidemic and comparatively few farmers or fruit growers have complained of grasshopper damage.

WHITE GRUBS (Phyllophaga spp.)

Alabama J. M. Robinson (August 6): The white grubs have been reported from Coal City, as destroying strawberries.

Michigan Philip Enginbill (July 5): Attacking corn at Union City, and doing considerable damage.

Wisconsin S. B. Fracker (August 15): At Plattville, Grant County, adults are numerous, attacking oak trees.

Iowa C. N. Ainslie (August 6): Potato diggers at Sioux City report many white grubs in the ground this summer doing some damage to the tubers. These grubs are of two sizes, about full-grown and very small, the latter probably from eggs laid this year. The beetles were only moderately numerous in the early spring.

AN ANOMALA (Anomala flavipennis Burm.)

Alabama J. M. Robinson (August 6): Across the northern part of the State south of the Tennessee River an approach to "entomophobia" has been brought about in several communities because of the fright caused by the activities of Anomala flavipennis. These insects have been so abundant and so noisy with their flight that it has frightened several communities at night.

CUTWORMS (Noctuidae)

Florida F. S. Chamberlin (August 11): Cutworms (various species) are causing a little trouble at the present time in Gadsden County. No instance has been observed where poisoned-bait applications have been needed.

Wisconsin S. B. Fracker (August 15): Cutworms were reported as generally destructive over the greater part of the State, reports of damage running from 5 to as high as 50 per cent of the truck crops. They were the outstanding pests of the season, but were less serious than during the two preceding years.

Iowa C. J. Drake (August 20): Cutworms (several species) have been over-abundant in Iowa this year. In the early spring the damage was very extensive in gardens, truck fields, and cornfields.

WIREWORMS (Elateridae)

Wisconsin S. B. Fracker (August 15): Some damage has been done to corn in Dane and La Fayette Counties in the southern part of the State.

Montana J. R. Parker (August 10): Wireworms (Limonius sp.) are doing quite extensive injury to potatoes at Three Forks. Thirty acres had to be replanted last spring because of injury to the seed pieces, as many as 10 or 15 wireworms having been found in one piece of potato. They are still present in the field, one of them now and then having transformed to the pupa.

CEREAL AND FORAGE-CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

New York C. R. Crosby and assistants: The annual Hessian-fly survey has been completed in New York. The percentage of infestation is high enough in a number of counties to make it advisable for growers to

plan to sow wheat after the fly-free date.

The following table indicates the percentage of infestation in the counties surveyed. The same counties surveyed last year and in 1924 were again surveyed this year. In 1924 this region showed 5.9 per cent infestation, in 1925 the infestation dropped to 1.5 per cent, and this year it rose again to 3.6 per cent.

<u>COUNTIES</u>	<u>PER CENT</u>
Gayuga	2
Chemung	1
Erie	2.4
Genesee	4.5
Livingston	2
Monroe	6
Niagara	8
Onondaga	2.7
Ontario	1.5
Orleans	3.2
Oswego	No record
Schuyler	0
Tompkins	2
Wayne	3.2
Wyoming	3
Yates	2.7
Cortland	No infestation

Ohio

T. H. Parks (August 17): The annual wheat insect survey covered 29 of the principal wheat-growing counties. Wheat yields were the highest in many years. The Hessian fly did little damage. Four counties had less than 1 per cent of the straws infested. The average infestation for 11 counties in northern Ohio was 4 per cent. This represents no increase over 1925. South of Columbus the insect has decreased since last year and the southern third of the State has less than 4 per cent infestation.

The most Hessian flies during the 1926 survey were found in a group of counties starting from Delaware on the east and extending westward across the middle of the State to the Indiana line. Counties having the highest infestation were: Delaware, 38 per cent; Darke, 35 per cent; Champaign, 28 per cent; Shelby, 25 per cent, and Miami, 16 per cent. In these counties the established safe seeding date held true in 1925 and the infestation occurring there seems to be largely due to volunteer wheat and a few early-sown fields. Control campaigns will be concentrated in this group of counties this fall. The average infestation for the entire State this year is 8.8 per cent compared with 7.5 per cent in 1925.

Illinois

W. P. Flint (August 23): The annual wheat insect survey has just been completed. This year examinations were made in wheat stubble fields in some 50 counties in the State. A decrease in flies was noted in all counties with the exception of those in the northern and north-western parts of the State. In this area the fly is present in about the same numbers as in 1925. Although in no case will the infestation average less than 2 per cent, it is very general. Very few

fields were found in which no infested stubble occurred. Volunteer wheat is just starting to grow and it is probable that no damage from the brood arising in volunteer wheat will occur this fall.

WHEAT MIDGE (Thecodiplosis mosellana Gehin)

- Ohio T. H. Parks (August 17): The wheat midge was very scarce in Ohio wheat this year. No complaints were received and in many counties specimens were not found on the wheat insect survey.
- Washington R. L. Webster (August 17): There was considerable damage to wheat in Skagit County according to report from county agent C. H. Bergstrom. The insect is said to be getting more common in Whatcom County. More injury this year.

GREEN BUG (Toxoptera graminum Rond.)

- Wisconsin S. B. Fracker (August 15): Present throughout the State. Noted in Florence, Racine, Clark, Oconoto, and St. Croix Counties; injury severe in last two. In general kept under control by Coccinellidae.
- Iowa Carl J. Drake (August 20): The green bug was found in certain parts of Polk and Crawford Counties, but it is not numerous enough to be of much economic importance.

JOINT WORM (Harmolita tritici Fitch)

- Ohio T. H. Parks (August 17): This insect is now very scarce in Ohio. In many counties visited on the wheat insect survey the insect was not encountered. It has not seriously infested wheat here for eight years.
- Oregon T. R. Chamberlin (August 26): An area about 12 miles square in Clackamas and Marion Counties with Camby at the north, Molalla at the east, Moritor at the south, and Woodburn at the west is affected. Infestation is light at the edges of the area and heavy near the center where one of the fields shows 95.1 per cent of the culms infested. In this field, as high as 3 joints per culm have been found infested. Stems so far dissected show an average of 14 larvae per joint with a maximum of 19. All examinations were made of stubble. A eupelmid parasite and what may prove to be Ditropinotus aureoviridis have been recovered. No adults of the joint worm itself have yet been reared.

This is the first discovery of the species in the northwest although great numbers of wheat stems have been examined during the last eight years throughout the Willamette Valley in connection with Hessian fly work. (Tentatively determined by W. J. Phillips).

CORN

CHINCH BUG (Eliogmus leucopterus Say)

- Ohio T. H. Parks (August 17): Chinch bugs damaged corn locally in a few

central and west-central counties. No general damage resulted and the bugs were not thick enough to harm more than a few outside rows of the late-planted corn.

Illinois W. P. Flint (August 23): The month of August has been extremely wet in all parts of the State. This has placed a very distinct check on the chinch-bug increase and it is probable that these insects will not be much more abundant than was the case at the beginning of the season.

Missouri L. Haseman (August 27): The rainfall during August has been unfavorable for the development of the summer brood of chinch bugs.

CORN EAR WORM (Heliothis obsoleta Fab.)

Indiana C. R. Cleveland (August 24): A moderate number of reports showing the presence of the corn ear worm in both sweet and field corn are being received. This insect does not seem to be so abundant or troublesome as in some previous years.

Iowa C. J. Drake (August 20): The corn ear worm is very common in Ames and seems to be very abundant over the entire State this season. At the present time the adults are emerging and laying their eggs on late sweet corn.

C. W. Ainslie (August 20): This pest seems more abundant and destructive this season than for many years at Sioux City. Examination of numerous cornfields indicates that nearly every ear harbors one of the larvae, seldom more than one. As a rule only the tip of the ear for an inch or two is destroyed but this means a high percentage of loss not to speak of the subsequent deterioration in the crib because of the mold induced by the worm droppings in the ear-tip. Even late-planted sweet corn is just now being injured by quite small larvae of this species that do not confine themselves to the tip of the ears and sometimes occur several in a single ear. Curiously enough very few of the adults have been taken this season.

Missouri L. Haseman (August 27): During late July and early August sweet corn was severely injured by the corn ear worm, but during the last two weeks of August in central Missouri the ear worms have been less abundant.

SOUTHERN CORN STALK BORER (Diatraea geacolella Dyar)

Wisconsin S. B. Fracker (August 15): Ruined about half an acre in one field near Racine. Had practically disappeared by July 20 after actively working for three weeks. Wisconsin is outside the normal range of this species.

STALK BORER (Paratoma nitela Guen.)

Indiana J. J. Davis (August 14): The common stalk borer has been the subject

of many more inquiries since last reported in the Bulletin, Dahlias have been reported as being attacked in several instances but more often corn, both field and sugarcorn. The localities include Decatur, Covington, La Fayette, Angola, Hessville, and Anderson.

Wisconsin S. B. Fracker (August 15): About the usual number of reports have come from the eastern part of the State. Not of great importance.

Iowa G. J. Drake (August 20): The common stalk borer is very abundant over the entire State. It has done considerable damage to corn and oats. It has also injured many garden and truck plants in the State. The adults are now emerging.

Nebraska M. H. Srenk (August 16): Although the large number of complaints of injury to corn by the common stalk borer ceased abruptly about July 20, scattering reports of injury continued to be received from counties lying south of the Platte River, especially from Pawnee, Gage, and Saunders Counties up to July 27.

ARMYWORM (*Girthis univertata* Haw.)

New York G. R. Crosby and assistants (August 3): Considerable damage was reported in a few localities in Cayuga County, wheat, corn, and other crops being attacked. In Allegany County a moderate infestation of this pest was reported from the villages of Belmont, Friendship, and Bolivar.

FALL ARMY WORM (*Heliothis virescens* S. & A.)

North Carolina W. A. Thomas (August 25): This is only a light outbreak, covering only a small area in the vicinity of Charlotte. Fully 50 per cent of the larvae are mature and ready for pupation. The mature larvae have a parasitism of 30 per cent, whereas no tachina eggs have been observed on the smaller larvae. Attacking crab grass.

Missouri L. Haseman (August 27): I have answered a few inquiries regarding the fall army worm destroying corn. In a few cases they have literally destroyed late fields of corn though apparently there is not a general epidemic of the pest in Missouri.

SUGARCANE BEETLE (*Eucinetus rugicaps* Lec.)

Alabama J. M. Robinson (August 6): Two counties reported the attack of the rough-headed cane beetle up to the middle of July. A farmer has just brought in 50 specimens taken from a cocklebur stalk and around the roots of the plant. He reports that one farmer has planted his corn six times on account of the activities of the adult beetles. This cornfield was on a dairy farm where a lot of manure is used each year.

CORN LEAF APHID (*Arhis maidis* Fitch)

Iowa G. J. Drake (August 20): The corn leaf aphid is very common in western Pottawattamie County and Fremont County, and in a few

fields a considerable amount of commercial damage has been done.

Nebraska M. H. Swenk (August 16): The corn leaf aphid became abundant in many Nebraska cornfields during the last week in July and the first week in August, and in some cases did serious damage to the corn tassels.

ALFALFA

ALFALFA WEEVIL (*Phytonomus posticus* Gyll.)

Utah & Geo. I. Reeves (August 9): As the scouting season for the alfalfa Wyoming weevil is probably finished this year, I am giving you a brief statement of the results of our work. Mr. Snow has found the weevil in four new counties in Colorado, namely, Moffat, Rio Blanco, Routt, and Ouray, and in one county, Carbon, in Wyoming, which is adjacent to the last named. Mr. Revell, an employee of our Bureau, has found weevils at Torrington, Goshute County, Wyo.

GREEN CLOVER WORM (*Plathypena scabra* Fab.)

Mississippi R. W. Harned (August 19): Specimens of the green clover worm were received on August 7 from Malden in Monroe County. They were reported as feeding on alfalfa.

GARDEN WEBWORM (*Loxostege similalis* Guen.)

Missouri L. Haseman (August 27): This pest has continued to attract attention throughout the month particularly on corn and alfalfa in the northern half of the State.

LEAFHOPPERS (Jassidae)

Indiana C. R. Cleveland (August 24): Members of the Soils and Crops Department have brought in reports of hundreds of acres of alfalfa in the northern part of the State suffering badly from yellowing and leaf spot. Associated with this condition are heavy infestations of leafhoppers (species undetermined).

CLOVER

CLOVER ROOT BORER (*Ulyastinus obscurus* Marsham)

Indiana C. R. Cleveland (August 24): Infestation and considerable injury by this insect were found in a field of red clover in the vicinity of La Fayette on August 9.

CLOVER STEM BORER (*Janusaria nozardi* Latr.)

Ohio T. H. Parks (August 26): Beetles, pupae, and damaged stems were received from the county agent with the statement that the insect was destroying a field of sweet clover in Champaign County. Have not been able to visit the locality.

CLOVER FLOWER MIDGE (Dasynewa leguminicola Lint.)

Washington R. L. Webster (August 3): D. B. Leonard, assistant county agent at Kelso, reports that larvae of this midge are appearing in large numbers in Cowlitz County in fields of clover that are to be harvested for seed.

SORGHUM

SORGHUM MIDGE (Contarinia sorghicola Coq.)

Mississippi R. W. Earned (August 18): Specimens of Contarinia sorghicola were collected on sorghum at Washington, Miss., on July 30.

VELVET BEANS

VELVET BEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

Florida J. R. Watson (August 30): The velvet bean caterpillar is doing considerable damage to velvet beans from Gainesvilles south.

FRUIT INSECTS

APPLE

APHIDAE

Utah E. F. Knowlton (July 30): Aphids in general are much less numerous this year than last, although a few of the common pests, as the cabbage, peach and black cherry aphids were about as numerous as usual.

ROSE APPLE ACHID (Anuraphis rosae Baker)

Connecticut W. E. Britton (August 17): Injury came late in the season but at Ledyard was more severe than I have ever seen it elsewhere this season.

CODLING MOTH (Carpocapsa pomonella L.)

New Jersey C. J. Grant (August 7): Apples were seriously damaged by this insect at Glassboro.

South Carolina J. O. Pepper (August 11): The larvae and pupae of this insect are abundant in Oconee County this year at the present time. However, the spray schedule has been followed out closely.

Indiana & Kentucky Bennet A. Porter (August 24): Still unusually abundant in southern Indiana and western Kentucky.

Illinois W. P. Flint (August 23): The codling moth has continued to increase in all sections of the State. At the present time a heavier infestation exists in sprayed and unsprayed orchards than has been the case since 1914. In some orchards which have been sprayed.

as many as nine times, 30 to 40 per cent of the fruit was infested.

Wisconsin S. B. Fracker (August 15): Apparently less troublesome than usual, but infestation has been running as high as 20 per cent in Winnebago, and in Manitowoc 35 per cent.

Missouri L. Haseman (August 27): The second brood of the codling moth began to emerge at about its normal time, namely, July 7 to 15 for central Missouri but the brood continued to emerge until early August.

Second-brood side worms are unusually abundant therefore where only one July spray was applied early. The prolonged emergence has made it difficult for Missouri apple growers to control the pest this year.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

Massachusetts A. I. Bourne (August 19): Within the last few days we have begun to note full-grown larvae in scattering numbers here and there in this vicinity (Amherst). The scarcity of this insect this season may be accounted for by the fact that fruit growers have been giving more attention to their spraying and have been spraying later in the season than has been their custom up to this time. The first of the second-brood moths were observed flying August 19.

FALL WEBWORM (Hyphantria cunea Drury)

Massachusetts A. I. Bourne (August 19): The fall webworm has been for the last two weeks making itself apparent. As near as we could determine from our observations, the pest is present in about normal abundance. There has been a very wide range in the development of the larvae. It has been possible to find, in a comparatively small area, larvae which were two-thirds or more grown, and also, on almost adjoining trees, others which had emerged within a week.

Connecticut J. L. Rogers (August 24): Many more tents were observed in nurseries this month than usual in Fairfield and Hartford Counties. There has been a slight increase over last year.

FRUIT TREE LEAF ROLLER (Archips argyrospila Walk.)

Missouri L. Haseman (August 27): The apple trees in the nursery row and young trees in the orchard have been quite severely attacked by the leaf roller though the epidemics have not been so severe in central Missouri this year as they were last year.

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Indiana C. R. Cleveland (August 24): Report from Indianapolis as completely defoliating a considerable number of trees in a two-year-old orchard.

Ohio E. W. Mendenhall (August 27): I find some yellow-necked caterpillar in Miami County on apple especially in nursery stock. .

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

Massachusetts A. I. Bourne (August 19): The red-humped caterpillar in this section (Amherst) is present in greater abundance than I have noted it for several years. Apparently the hatch of these insects was drawn out over a considerable period, so that we have had colonies under observation in which the larvae had reached maturity and left the trees, and others in which the larvae had not emerged for more than about a week.

Indiana Bennet A. Porter (August 24): Occasional colonies are seen in young apple orchards at Vincennes which have received little or no spray material.

LEOPARD MOTH (Zeuzera pyrina L.)

New Jersey C. J. Grant (August 7): Attacking apple at Glassboro, there being slight damage done.

APPLE MAGGOT (Phagoletis pomonella Walsh)

Massachusetts A. I. Bourne (August 19): During the first week in August in orchards in Hampshire County, we began to note the appearance of considerable numbers of the apple maggot. Last year apples suffered from a very heavy infestation of this insect. The flies have been noted in large numbers. We have been able to collect at least two or three hundred adult flies from one tree, which represents only those we were able to reach, collecting by hand from the ground. Flies have been observed and collected, to date, on approximately all of our standard varieties of apples. During this present week the numbers seem to have fallen off somewhat although the flies are still present. Apparently the peak of their abundance occurred during the week of August 9 to 14. We have already observed the mature maggots to have begun to leave such early fruit as Yellow Transparents and to form their puparia.

LEAFHOPPERS (Jassidae)

Indiana Bennet A. Porter (August 24): Apple leafhoppers (numerous species) extremely abundant in all apple orchards in southern Indiana. Foliage is badly devitalized as a result of the numerous feeding punctures. Fruit shows considerable specking and some tear streaking as a result of deposits of excrement.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Indiana Bennet A. Porter (August 24): Scale-marked fruit is occasionally seen, but in general scale is not particularly abundant at the present writing.

Wisconsin S. B. Fracker (August 15): Introduced on eastern nursery stock to Waterloo and Fort Atkinson in Jefferson County but found and destroyed. No new localities in which the San Jose scale has become established have been observed this season.

Missouri L. Haseman (August 27): The scale continues to show little signs of increasing anywhere in the State and in orchards which were dangerously infested a year ago it is practically impossible to find any blotching of the fruit at this time.

PLUM CURCULIO (Conotrachelus nemophar Ebst.)

Wisconsin S. B. Fracker (August 15): As a whole less injurious than usual. At La Fayette there is 15 to 25 per cent infestation, and at Pierce 5 per cent.

APPLE CURCULIO (Tachypterellus quadrigibbus Say)

Iowa C. J. Drake (August 20): The apple curculio has been very common in the orchards in the vicinity of Des Moines.

A GREEN FLEA BEETLE (Haltica sp.)

Missouri L. Haseman (August 27): A small jumping leaf beetle possibly a flea beetle has been attracting unusual attention during the past two months as a pest of apple foliage in the nursery and on young orchard trees.

APPLE SEED CHALCID (Syntomaspis druparum Boh.)

Massachusetts A. I. Bourne (August 19): From the 8th to the 10th of August we began to note the full-grown larvae of the apple seed chalcid in the apple seeds. Practically all of the crab apples in the college orchard this season show the characteristic injury of this insect.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Ohio T. H. Parks (August 17): The European red mite put in its appearance in midsummer and was seriously injuring the foliage on some apple trees in the Lake Erie region. The worst damage was found on foliage which had been dusted with sulphur and arsenate of lead for scab and the codling moth.

PEAR

PEAR SLUGS (Eriocarpoides limacina Retz.)

Ohio E. W. Mendenhall (August 10): Pear slugs are unusually bad in orchards and in nursery stock in the central and southern parts of the State this summer.

ORIENTAL FRUIT MOTH (Mespeyresia molesta Busck)

- Connecticut Philip Garman (August 24): Now well distributed through western and central Connecticut extending north along the Connecticut Valley to the Massachusetts line. Apparently more abundant than last year.
- Georgia Oliver I. Snapp (August 20): Fifth-generation eggs are now being deposited in the insectary at Fort Valley. The infestation here is very light this year.

FLUM CURCULIO (Conotrachelus nenuphar Hbst.)

- Massachusetts A. I. Bourne (August 19): Mr. Whitcomb in Middlesex County reports that he noticed the first adults emerging from the soil August 3. About the 7th they were coming out in large numbers.
- New Jersey C. J. Grant (July 30): Attacking peach and apple at Glassboro, the damage being slight.
- Georgia Oliver I. Snapp (August 20): The total movement of Georgia peaches this year was nearly 18,000 carloads, the largest on record. Not a single complaint of curculio damage was heard. Jarring peach orchards in this locality (Fort Valley) after harvest showed that there are very few adults left for hibernation.
- Illinois W. P. Flint (August 23): A peach investigation is now in full swing in the southern Illinois section. Damage by the curculio is extremely light this season. A careful examination of nearly 10,000 peaches in specimen plots showed about 3 curculio injuries. The dry summers of the past two seasons have apparently been largely responsible for the decrease in this insect.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

- Georgia Oliver I. Snapp (August 20): The San Jose scale has increased rapidly during the past month at Fort Valley, when conditions were favorable for reproduction. There has been a marked increase in some orchards, even where they had been sprayed for the scale last winter. More abundant as compared with last month.

GRAPE

GRAPE LEAFHOPPER (Erythroneura somea Say)

- Nebraska M. H. Swenk: Reports of severe injury to woodbine vines about houses and to grapevines, by the grape leafhopper continued to be received during the period covered by this report (July 25-August 15). The August complaints were not only received from central and western Nebraska (though the pest

was much complained of in Keith and Grant Counties) but, toward the middle of August, from localities as far east as Lancaster and Gage Counties.

Texas F. C. Bishopp (August 27): The work of the grape leafhoppers is very much in evidence in Dallas, Tarrant, McCulloch, Mason, and Uvalde Counties, in many instances every leaf on the grapevines has been killed. The grape crop has materially reduced by the early appearance and abundance of these hoppers.

GRAPE PHYLLOXERA (*Phylloxera vitifoliae* Fitch)

Wisconsin S. B. Fracker (August 15): Numerous on grape leaves in Jefferson, La Crosse, and Milwaukee Counties.

BLACK VINE WEEVIL (*Brachyrhinus sulcatus* Fab.)

California E. O. Essig (June 5): First collection, in southern California, at Glendale.

YELLOW-HEADED FIREWORM (*Peronea minuta* Rob.)

Massachusetts A. I. Bourne (August 19): Mr. Lacroix reports, under date of July 26, that the yellow-headed fireworm is present in about normal abundance on the cranberry in Wareham and adjoining towns in southern Plymouth County and at the base of the Cape, and that the summer brood of moths have been noted flying in abundance from July 10 to July 28, approximately two weeks later than the expected period for this insect.

PECAN

TETRALOPHA SP.

Alabama J. M. Robinson (August 6): Late in June we received specimens of cocoons and adults of a moth, the larvae having attacked the foliage of pecans in Mobile County. On sending them to Washington for identification we found that it was *Tetralopha* sp., and that it is very probably a new species.

WALNUT CATERPILLAR (*Datana integerrima* G. & R.)

Mississippi R. W. Harned (August 13): A very serious infestation of the walnut caterpillar occurs at the present time in one pecan grove at Starkville, Oktobcha County. Comptons in regard to these insects, accompanied by specimens, have also been received from Pearl River and Adams Counties.

CITRUS

MELON APHID (*Aphis muscivora* Glov.)

Alabama J. M. Robinson (August 6): The cotton aphid has been sent in on

Satsuma twigs from Mobile.

CITRUS RUST MITE (Eriophyes citivorus Ashm.)

Florida J. R. Watson (August 30): The outstanding entomological surprise of the month of August has been the persistent infestation of citrus rust mites in citrus groves. Almost universally, heretofore, the rust mite has disappeared with the advent of the rainy season, or shortly after; but this year it has persisted throughout the entire summer. For some unaccountable reason the rust-mite fungus has not been as effective as usual.

TRUCK-CROP INSECTS

MISCELLANEOUS FEEDERS

BLISTER BEETLES (Meloidae)

Alabama J. M. Robinson (August 6): One of the blister beetles, Macrobasis unicolor Kirby, continues to work on beans, causing considerable damage in small areas.

Ohio T. H. Parks (August 26): Blister-beetle damage continues to come in. The pest is much more numerous than usual and the standard-strength arsenate-of-lead sprays on potatoes are of little value.

Indiana J. J. Davis (August 14): Blister beetles have been the most conspicuous pests the past month.

C. R. Cleveland (August 24): A lesser number of cases of blister beetle infestation and damage are being received at this time than was true a month ago. The blister beetles during July were unusually troublesome, but the severity of the infestation seems to be subsiding at this time.

Nebraska M. H. Swenk (August 16): Reports of injury by the large brown blister beetle Macrobasis immaculata Say and related species, to potatoes, tomatoes, and other plants were received during the first week in August from Franklin County.

Missouri L. Haseman (August 27): Several complaints regarding blister beetles have been received during August though apparently the intensity of the infestations has been less severe than they were last year.

. PAINTED LADY (Vanessa cardui L.)

Wisconsin S. B. Fracker: Defoliation of Canada thistle attracted attention in Ashland, Dane, and Green Lake Counties.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Lectinotarsa decemlineata Say)

Connecticut W. E. Britton (August 24): Reported on potatoes throughout the

State. Less abundant as compared with an average year.

- Wisconsin S. B. Fracker (August 15): Much less numerous than usual in the State as a whole.
- New Mexico J. R. Douglass (July 25): The first complaint of the Colorado potato beetle has been received. This is the first appearance of this insect in the Estancia Valley since this station was established in 1923.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

- Nebraska M. H. Swenk (August 16): Serious injury to tomatoes by the potato flea beetle was reported from Saunders County during the last week in July.

SEED CORN MAGGOT (Hylemyia ciliatrypa Rond.)

- Ohio T. H. Parks (August 17): Heavy damage resulted from these maggots which infested seed potatoes in a field in Summit County. The seed rotted in the ground as a result of the maggot work. On July 8 the flies were common on the ground surface and the pupae were present in the soil. Three-fourths of the seed pieces had been damaged so badly that they did not grow.

POTATO LENTIL BEETLE (Empoasca fabae Harris)

- Wisconsin S. B. Fracker (August 15): Considerable damage in southern and southwestern Wisconsin and in the eastern part of the northern potato-growing section; slight in northwestern part of the State.

NORTHERN MOLE CRICKET (Scytalopus hexadactylus Perry)

- Indiana J. J. Davis (August 14): The mole cricket was reported damaging potato tubers at Morgantown on July 26.

FALSE CHINCH BUG (Blissus ericae Schill.)

- Washington R. L. Webster (August 10): Reported as causing severe injury in Lake Chehalis district.

TOMATO WORM (Pectinophora sexta Joh.)

- Ohio E. W. Mendenhall (August 10): Tomato worms are unusually bad this summer in the central and southern part of the State.

CORN EAR WORM (Heliothis obsoleta Fab.)

- South Carolina J. O. Pepper (August 12): The injury caused by this insect on tomatoes is decreasing in the Piedmont Section of this State.

TOMATO SUCKLER (Dioxytripes minimus Uhler)

- Mississippi J. E. Graf (August 1): We have been advised by M. M. High our

representative at Gulfport, under date of August 4, that the tomato suckfly has been found at Ocean Springs for the first time.

EGGPLANT BEAF MINER (Phthorimaea glochinella Zell.)

California A. W. Morrill (August 10): Larvae common on leaves, 5 to 10 specimens found on some plants in San Onofre, San Diego County. Infestation of fruit estimated as about 5 per cent. As the crop is being grown for seed and the worms confine attacks to stem ends of fruits there is no appreciable damage at present. Considerable damage to shipping tomatoes later in the season is indicated. This appears to be a new locality record for this species.

A MIRID (Cyrtopeltis varians Dist. (Enzytatus geniculatus Reut.)

California A. W. Morrill (August 10): Mosaic disease was very general and loss from this source will probably amount to at least 15 per cent at San Onofre, San Diego County. Only two species of insects present which might have acted as carriers, an aphid and the mirid. In no place were insects of either group abundant enough to cause direct damage. If mosaic was insect borne this active mirid is more likely to have been principal factor. Estimated 5 specimens per plant, nymphs and adults in proportion of 4 to 1.

CABBAGE

HARLEQUIN BUG (Murgantia histrionica Hahn)

Alabama L. W. Brannon (August 20): Patches of collards and cabbage seriously damaged by this insect at Birmingham. Damage varies from 0 to 95 per cent. Also attacking mustard and turnips.

IMPORTED CABBAGE WORM (Pieris rapae L.)

Massachusetts A. I. Bourne (August 19): During the first week in August we were noting here at the College and immediate vicinity a few specimens of the summer generation of cabbage butterflies hovering over the fields. During the next week they were out in considerable numbers.

Wisconsin S. B. Fracker (August 15): Some damage throughout the State, about as usual. Damage estimated in Bayfield County 10 to 15 per cent, Crawford County 5 per cent, Oconto County 6 per cent, Pepin County 2 per cent, and Winnebago County 5 per cent.

Missouri L. Haseman (August 27): In the early part of summer the imported cabbage worm was very scarce through central Missouri but during the forepart of August unusually heavy swarms of this pest appeared.

CABBAGE MAGGOT (Phylomyia brassicae Bouche')

Indiana J. J. Davis (August 14): The cabbage maggot was reported as a pest of cabbage at Modor on July 29.

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Wisconsin S. B. Fracker (August 15): Serious damage is being done to cabbage in commercial cabbage-growing sections. About Milwaukee, Racine, Winnebago, and Oshkosh damage is running from 15 to 80 per cent. Also reported as more or less troublesome from other parts of the State.

Iowa C. J. Drake (August 20): The cabbage maggot has been doing considerable damage around Cedar Rapids. It was reported in the vicinity of Des Moines and Ames for the first time in 1925.

STRAWBERRY

STRAWBERRY ROOT WORM (*Paria canella* Fab.)

California E. O. Essig (August 25): Complete destruction of small areas in patches of strawberries growing in San Mateo, Santa Clara, and Alameda Counties, in the San Francisco Bay Region. Damage most evident in July and August.

STRAWBERRY CROWN BORER (*Tylosiderma fragariae* Riley)

Missouri L. Hageman (August 27): The inspection of strawberry fields during the month has shown an alarming abundance of crown borer. There is a real epidemic of it apparently and it is more severe than last year.

ASPARAGUS

ASPARAGUS BEETLE (*Chalcidius asparagi* L.)

Wisconsin S. B. Fracker (August 15): Practically no reports of injury. Although present in Dane County they must be much scarcer than usual in the State as a whole.

Iowa C. J. Drake (August 20): The asparagus beetle has been doing considerable damage in eastern Iowa. It was found in the vicinity of Des Moines and Ames for the first time during the season of 1925. This year it is quite common at Ames, but not numerous enough to do any commercial damage.

PEAS

MEXICAN BEAN BEETLE (*Epilachna corrupta* Muls.)

Maryland Neale F. Howard (August 25): Reported from Garrett County.

Virginia Neale F. Howard (August 25): Reported from Albemarle, Bedford, Campbell, Pittsylvania, Augusta, Franklin, and Patrick Counties.

North Carolina Neale F. Howard (August 25): Reported from Caswell County.

- South Carolina J. O. Pepper (August 18): Eggs, larvae, and pupae largely killed out by heat wave in July. Larvae again becoming common in infested areas.
- Indiana J. J. Davis (August 14): No further spread of the Mexican bean beetle has been noted.
- Neale F. Howard (August 25): Reported from Clinton County.
- Ohio Neale F. Howard (August 25): Reported from Huron, Erie, and Sandusky Counties.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

- North Carolina W. A. Thomas (August 24): The work of this insect was observed on about one-quarter acre of snap beans on a farm near the laboratory (Chadbourn). Approximately 50 per cent of the plants were injured, many of these having already died, some dying, and others showing little sign of growth. The larva enters the stalk at or near the surface of the soil and tunnels both up and down the plant throughout its entire length. The larvae apparently migrate from one plant to another, causing severe damage as they go. Quite a number of specimens were found feeding within the stalk, while some were observed resting within the silken tube at the base of the plant. The larvae vary greatly in size, but the larger percentage are approximately half grown. A few dead specimens were observed in the stalks, apparently having been killed by some disease.

CORN EAR WORM (Heliothis obsoleta Fab.)

- South Carolina J. O. Pepper (August 13): The injury caused by this insect to beans is decreasing in the Piedmont section of this State.

BROWN COLASPIS (Colaspis brunnea Fab.)

- New York C. R. Crosby and assistants (July 22): In Genesee County one field of beans was rather seriously injured by the adult beetles.

PEAS

PEA APHID (Illinoia pisi Kalt.)

- Alabama J. M. Robinson (August 6): At Maplesville the pea aphid has been causing considerable damage.
- Wisconsin S. B. Fracker (August 15): Damage and distribution spotted and irregular; very scarce at Columbus; injurious at Oconomowoc, Fond du Lac, Milwaukee, and Beaver Dam.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

- Connecticut W. E. Britton (August 24): Beetles appeared in numbers very

late in the season at Hamden. Many vines had the main root punctured by larvae and soon wilted and died. A heavy dusting of calcium fluosilicate cleaned the vines of adults, but probably the eggs had been laid.

Wisconsin S. B. Fracker (August 15): As a whole there seems to be less damage than usual in the State. About Winnebago, Pepin, and Manitowoc, damage is running from 4 to 25 per cent.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Connecticut W. E. Britton (August 24): Extremely abundant on squash vines in Hamden; also recorded at Ledyard. Seemingly more abundant as compared with an average year.

South Carolina J. O. Pepper (August 9): This insect has been abundant on melons and cucumbers in the Piedmont section of the State this year.

Alabama J. M. Robinson (August 6): The squash bug has been reported very general over the State, attacking associated host plants.

SQUASH LADYBIRD (Epilachna borealis Fab.)

Connecticut W. E. Britton (August 17): In one garden at Ledyard nearly all squash vines showed injury by larvae. Adults also were present.

MELON WORM (Diaphania hyalinata L.)

North Carolina W. A. Thomas (August 17): The damage by this insect is nearly a month later this season in the Chadbourne locality. Most of the late summer squash vines have been completely defoliated within the past week and the larvae are now attacking late melons.

PICKLE WORM (Diaphania nitidalis Cramer)

Florida F. S. Chamberlin (August 5): One field of crook-necked summer squashes was found heavily infested with the pickle worm on August 5 in Gadsden County. The damage caused by this insect was estimated at 90 percent of the crops.

SQUASH BORER (Melittia satyriniformis Hbn.)

Indiana J. J. Davis (August 14): The squash vine borer was reported damaging squash at Alexandria on July 28.

ONIONS

ONION MAGGOT (Hylemyia antiqua Meig.)

Wisconsin S. B. Fracker (August 15): Apparently caused less damage than usual in commercial districts.

SWISS CHARD

HAWAIIAN BEET WEBWORM (Hymenia fascialis Cramer)

Alabama L. W. Brannon (August 17): Swiss chard grown by truckers in this vicinity (Birmingham) has been eaten up by this insect. Damage ranged from 0 to 100 per cent. More abundant as compared with last month, and about the same as compared with an average year.

A LONGICORN BEETLE (Heterocinetus Oliv.)

Alabama M. M. Robinson (August 6): From Jeff we are informed that one of the large-horned beetles was guilty of girdling artichokes about 2 feet from the top of the plant. The correspondent was attempting to raise these artichokes as hog feed.

BEETS

BEET ROOT APHID (Pemphigus betae Doane)

Utah George F. Knowlton (August 21): The beet root aphid is doing considerable damage in some beet fields west of Logan on cold, damp soil. There are few places in the State where this pest is doing much damage this year.

BEET WEBWORM (Homostegia sticticalis L.)

Iowa Carl J. Drake (August 20): The sugar-beet webworm is doing considerable damage to alfalfa and corn in the western portions of Sioux and Plymouth Counties. The county agents and farmers report that the worms have been eating leaves and the silk of the corn. Many ears of late corn have been badly injured because the webworms have eaten off all of the silk. Some of the farmers report rather extensive damage here and there in the counties.

Nebraska M. H. Srenk (August 16): During the second week in August the sugar-beet webworm appeared in large numbers in the stubble fields of Boyd County, feeding chiefly on the Russian thistles but also doing some injury to corn.

Utah G. F. Knowlton (July 30): There were several outbreaks of the sugar-beet webworm around Cornish and Lewiston this spring.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cand)

California J. O. Elmore (August 25): The pepper weevil has spread to practically all parts of the pepper-growing area in Orange County and has become of major importance there. In many fields where otherwise large yields should be obtained the loss is estimated at 50 to 65 per cent of the crop. It seems that the first setting, which has

reached maturity is all that will escape damage. All varieties are affected although the chili varieties are more easily dropped when slightly infested than are the sweet or pimiento varieties. Approximately 8,000 acres are in the peppers this year. The weevil is more abundant as compared with last month.

EGGPLANT LACE BUG (*Gargaphia solani* Heid.)

Alabama J. M. Robinson (August 6): Eggplants at Alexander City have been approximately destroyed by the action of the eggplant lace bug,

North W. A. Thomas (August 26): At Chadbourne these small insects have Carolina just appeared on the foliage of eggplant, but are not doing serious damage. The bulk of the fruit is already harvested.

CELERY

GARDEN CARTERION BEETLE (*Silpha ramosa* Say)

California E. O. Essig (August 25): Adults and larvae attacking young celery plants in seedbeds of the Delta sections of San Joaquin and Sacramento Counties, doing serious damage.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

BEAN THRIPS (*Heliothrips fasciatus* Perg.)

Mexico A. W. Morrill (August 10): Thrips, with little doubt the common bean thrips Heliothrips fasciatus, were reported by a correspondent cooperating in cotton experiments as causing a loss of 50 per cent of the foliage in a few spots in experimental fields.

BOLL WEEVIL (*Anthonomus grandis* Boh.)

GENERAL
STATEMENT

Cooperative report on cotton insects (August 16): In Texas weevils are reported throughout the central and eastern portions with widely scattered reports of damage. In Oklahoma weevil damage has been reported in the southeastern portion. In Arkansas damage is reported as being done by weevils in local areas in some of the eastern counties. In Louisiana weevil damage is reported throughout the State. In Mississippi weevils are reported as on the increase, with considerable damage in some areas. In Alabama there is reported a general infestation of weevils with some damage in the southern portion. In Tennessee some damage has been reported in local areas in the southwestern portion. In Georgia a few reports of weevil damage in local areas in the northern portion have been received. In South Carolina a light weevil infestation is reported generally, with some damage in

local areas. In North Carolina general light weevil infestation is reported, with heavy infestations in restricted areas.

Alabama J. M. Robinson (August 6): Boll weevils in the northern part of the State have done approximately no damage but they are quite abundant in restricted territories in the southern and central parts.

Mississippi R. W. Harned (August 18): With rainy, cloudy weather prevailing in many sections since the first of the month, boll weevils have multiplied rapidly, causing heavy damage in many counties. An average infestation of about 10 per cent was found on all farms examined by the State Plant Board inspectors during the past week, with many infestations running from 25 to 50 per cent. The extreme northern counties still report very few weevils.

Louisiana W. E. Hinds (August 24): Boll weevils are increasing rapidly throughout the State, some heavy infestations now being reported from the northern section -- in territory that has been nearly free from weevils during 1924 and 1925. These weevils will be in time to reduce the yields considerably unless proper applications of poison are made.

Texas F. C. Bishopp (August 27): The boll weevil is causing heavy damage to irrigated cotton in this section (Christoval). Practically all squares and many bolls from small to nearly full grown are infested. At Mason, on August 23, the weevil was causing heavy damage to irrigated cotton. Practically all squares and many bolls from small to nearly full grown were infested. Considerable boll weevil damage at Brownwood on August 24. Many half grown bolls and practically all squares punctured. Fields in this section (Stephenville) show from 10 to 80 per cent of the squares to be infested with boll weevils and some fields have many of the small bolls punctured.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

GENERAL STATEMENT Cooperative report on cotton insects (August 16): Reports indicate that flea hoppers are no longer active on cotton in most sections but in a few localities they are still present and doing damage. Hopper damage, varying from light to heavy, has been reported in practically all portions of the cotton belt. Normal fruiting after hoppers ceased work on cotton has been extremely variable. In some cases recovery was prompt whereas in others it has been very slow.

North Carolina Z. P. Metcalf (July 23): The cotton ~~flea~~ hopper situation seems to be gradually clearing up in this State although it is still bad in some sections. This insect produces a characteristic stunted appearance of the cotton plants.

South Carolina J. O. Pepper (August 18): Cotton flea infestations and damage increased during August in the Piedmont Section.

- Alabama J. M. Robinson (August 6): Various species of cotton flea hopper have been very active on cotton.
- Mississippi R. W. Harned (August 18): At this date it is very difficult to find cotton hoppers in fields in this locality (A. & M. College) that were heavily infested all through July. The hoppers are now very abundant on cotton, but none can be found on horsemint, which is practically all dead at this time. Hoppers were very abundant on horsemint during June and July.
- Louisiana W. E. Hinds (August 24): The cotton flea hoppers have ceased their work upon cotton in most sections, but many of the infested fields have not recovered normal fruiting. The work of these insects delayed the setting of fruit very greatly in many cases; and large areas in northern Louisiana were seriously affected. Fields dusted with sulphur early in the season for flea-hopper control came into fruiting generally some weeks earlier than undusted fields. But it takes at least 10 days longer for blooming to be resumed generally in the flea-hopper infested fields than where "complete infestation" by the boll weevil is controlled by poison.
- Texas F. C. Bishopp (August 27): Cotton flea hoppers were observed on cotton in Nolan, Tom Green, and Menard Counties. Apparently the damage caused by these insects was not so great as that in many sections of the eastern part of the State.

COTTON LEAF WORM (Alabama argillacea Hbn.)

GENERAL
STATEMENT

Copperative report on cotton insects (August 16): The leaf worm has defoliated practically all cotton in south-central Texas that has not been poisoned, and defoliation is common in the north-central and northeastern portions although much poison is being applied in these sections. In Oklahoma leaf worms are reported in the southeastern portions, with some defoliation. In Arkansas leaf worms are reported as destructive in some eastern and central counties. In Louisiana defoliation is reported as common in scattered areas throughout the State where poison has not been applied. In Mississippi worms are reported present in nearly all sections of the State. Some defoliation has been reported in southwestern Tennessee. In Alabama worms have been reported in scattered areas in the northern and western portions, with some defoliation. In most of the infested area the worms are now in the pupal stage with a few moths emerging. The next generation of worms is expected to appear about September 1.

- Alabama L. W. Brannon (August 23): This insect is seriously damaging cotton in a 10-acre field near the City limits of Birmingham.
- Mississippi R. W. Harned (August 18): About August 10, the cotton worm appeared in practically every county in northern Mississippi and in several spots in the southern part of the State. The supply

of calcium arsenate has been inadequate and the worms have worked so rapidly that much damage has resulted. Preparations are being made to combat the next generation of worms which is expected about September 1.

- Missouri L. Haseman (August 27): This pest has appeared in some cotton fields in the southeastern part of the State but has not as yet caused any real damage.
- Arkansas Dwight Isely (July 5): The cotton worm was first observed on July 2 at Texarkana, Miller County. This is two weeks earlier than in 1923. (July 16), which was our earliest record so far.
- Louisiana W. E. Hinds (August 24): Cotton leaf worms are reported from all sections of the State, and stripping is common in the northwestern half especially. Large quantities of calcium arsenate have been purchased by planters in anticipation of poisoning for leaf worms especially. Local supplies of poison will be entirely inadequate for the September dusting, which will be needed even more generally to protect the cotton while it is opening and prevent the lowering of grade from staining of the lint by the work of the worms.
- Texas F. C. Bishopp (August 27): Considerable defoliation of cotton fields was observed between Uvalde and San Antonio. Between San Antonio and Boerne some fields showed a slight infestation but very little defoliation was observed. Between Boerne and Brady the infestation was very spotted, some fields being half defoliated and others untouched. Very little evidence of leaf-worm injury was observed in Brown and Comanche Counties. In Erath County nearly all fields were infested, but very few showed any considerable defoliation.
- BOLL WORM (Heliothis obsoleta Fab.)
- North Carolina R. W. Leiby (August 2): More than the usual damage has been caused to the squares by the boll worm in the entire cotton section of the State.
- Alabama J. M. Robinson (August 6): The boll worm has been attracting attention in the southern portion of the State.
- Oklahoma C. R. Rube (August 26): Tillman County reports considerable damage from boll worms.
- Texas F. L. Thomas (August 18): Boll worms are reported in injurious numbers in 20 counties.
- F. C. Bishopp (August 27): Boll worms have caused considerable damage to cotton in this section (Lason) and some are still working in the fields. Boll worms have done some damage to cotton at Brownwood, but apparently they have largely ceased depredations. By August 26, comparatively little evidence of the boll-worm injury was noted at Stephenville. Some fields show the effects of the presence of boll worms but the damage has stopped. Heavy damage

has been felt in river-bottom areas near Dallas, some large fields being practically ruined. Many planters in this section are dusting for boll worms and leaf worms simultaneously.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

- Mississippi R. W. Harned (August 12): Specimens of the southern grass worm were received from Hattiesburg on August 16. They were reported as causing damage to cotton.
- Texas F. C. Bishopp (August 25): Considerable damage from this insect was observed in late cornfields in this region (Ft. Worth County). Some corn-stalks were infested with from one to five larvae.

MELON APHID (Aphis gossypii Glov.)

- South Carolina C. O. Eddy (August 16): A few minute aphids are being found at Clemson College. Most of these are on the young cotton plants.
- Louisiana W. E. Hinds (August 24): Cotton plant lice became abundant early in August at Baton Rouge, but have decreased decidedly during the period of heavy frequent showers which have occurred generally through the middle of the month. Considerable control work by applications of calcium arsenate and nicotine-sulphate dust was done with satisfactory results.
- B. R. Coad (August 24): At Tallulah, the only fields in which cotton lice can be found abundant are those that have been dusted repeatedly with calcium arsenate for experimental purposes.

- Texas F. C. Bishopp (August 26): Cotton lice are unusually abundant on fields in the vicinity of Dallas. They are worse on those which have been dusted for boll weevils and boll worms.
- F. L. Thomas (August 18): Lice are reported as doing injury in seven counties in the State.

TARNISHED PLANT BUG (Lycus pratensis L.)

- Alabama J. M. Robinson (August 6): Tarnished plant bugs in the northern part of the State have been very numerous on cotton.
- Louisiana W. E. Hinds (August 1): The tarnished plant bug (Lycus pratensis L.) and the rapid plant bug (Melphocoris rapilius Say) have been unusually abundant on cotton, sucking half-grown squares particularly and adding decidedly to hopper damage and apparently also to the spread of anthracnose or boll rot in the cotton.
- California E. O. Essig (August 1): The tarnished plant bug was reported attacking cotton bolls in Merced.

GARDEN WEBWORM (Homostegis similalis Guen.)

Missouri

L. Haseman (July 31): Many cotton growers are having serious trouble with the small caterpillar known as the garden webworm, which is attacking cotton. This is the pest's first real appearance in Missouri during the past 15 years.

Mississippi

E. W. Harned (August 18): During the latter part of July and the first of August specimens of the garden webworm on cotton were received from Adams, Pearl River, Coahoma, Bolivar, and Yazoo Counties. One complaint in regard to this insect damaging peas was received from Coahoma County. Another complaint in regard to damage by the garden webworm to alfalfa was received from Monroe County.

A CORN SILK BEETLE (Luperodes davisi Leng)

Alabama

J. M. Robinson (August 6): The corn silk beetle continues to appear in cotton fields near newly cleared ground and near the edge of woods. This insect devours nearly all portions of the cotton plant.

Mississippi

R. W. Harned (August 18): Insects identified as belonging to the genus Luperodes were collected on cotton at Mendenhall (Simpson County), and Hazlehurst (Copiah County) during the latter part of July. Complaints in regard to injury to corn by these insects were also received from Copiah and Jefferson Counties.

Tobacco

HORNWORMS (Protoparce spp.)

Florida

F. S. Chamberlin (July 6): The tobacco hornworm, Protoparce sexta Jch., is very abundant at the present time. A few of the northern form, P. quinquemaculata Haw., have been observed this season.

TOMATO SUCKFLY (Dicophus minimus Uhler)

Florida

F. S. Chamberlin (August 5): Late tobacco and suckers are rather heavily infested with the suckfly at the present time in Gadsden County. The main portion of the crop was harvested before damage resulted from this pest.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana

W. E. Hinds (August 24): Sugarcane borer infestation in corn during the first two generations has been quite extensive, but apparently not equal to that of 1925. The third generation of borers is now developing principally in cane, which is

showing a much higher infestation than has been found in cane earlier in the season, but will not apparently be nearly as severe as the unprecedented infestation of 1925. Arrangements are being perfected for extensive applications of sodium fluosilicate to cane by means of airplanes for the third and fourth generations of the borers. It is expected that applications to more than 1,500 acres will be given in this cooperative experimental work shared in by the cane grower, the firm manufacturing airplane dusters, and the Louisiana Experiment Station. This will be the first extensive use of insecticides for cane-borer control.

FOREST AND SHADE-TREE INSECTS

MISCELLANEOUS FEEDERS

PERIODICAL CICADA (Tibicina septendecim var. cassini

Fisher)

Kansas

J. W. McColloch (July 26): Specimens of the 17-year cicada were taken on June 9, at Wathena, by Mr. L. M. Gates, nursery inspector for the Kansas Entomological Commission, but owing to the fact that Mr. Gates is in the field most of the time the specimen was not brought to my attention until some weeks later. Mr. Gates stated that these cicadas were quite numerous in certain areas around Wathena. (Determination made by W. L. McAtee).

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Ohio

E. W. Mendenhall (August 27): I find the white-marked tussock moth feeding on the leaves of the shade trees in Piqua.

Wisconsin

S. B. Fracker (August 15): An active campaign of creosoting egg masses and spraying the trees for five years has nearly wiped out these insects at Milwaukee. A similar campaign about 1921 at La Crosse was successful but after a lapse of four years the larvae are again appearing.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

South Carolina

J. O. Pepper (July 20): Specimens of this insect have been received from St. George and reported as feeding on arborvitae shrubbery.

Alabama

J. M. Robinson (August 6): The bagworm on cedars and arborvitae has been reported from Guntersville and Tuscaloosa as very active.

Ohio

E. W. Mendenhall (August 10): The bagworms are riddling the foliage of many kinds of shade trees in Dayton and vicinity. Maples, boxelders, plane trees, etc., are being attacked.

Indiana

J. J. Davis (August 14): The bagworm has been reported injuring shade trees, evergreens, and apple in the southern end of the State.

Bennet A. Porter (August 24): Bagworms are abundant in many young apple orchards at Vincennes which have received little or no spray material. Some trees are about defoliated.

C. R. Cleveland (August 24): The bagworm has been reported with increasing frequency from various points in the State during the past two weeks.

Missouri L. Haseman (August 27): A great many complaints regarding bagworms have been received during August. They have come from various parts of the State though apparently the bagworms have been less destructive than last year.

FALL WEBWORM (Hyphantria cunea Drury)

Missouri L. Haseman (August 27): During the last two weeks of August this pest put in its appearance and is especially abundant on boxelder and mulberry.

RED SPIDER (Tetranychus telarius L.)

Virginia W. S. Abbott (July 2): Young (2 to 5 year) ornamental evergreens of many species in a nursery at Oakton were very seriously infested and in some cases killed by this red spider. Plants had been somewhat weakened by drought.

FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Nebraska M. H. Swenk (August 16): The flat-headed apple-tree borer was complained of as doing serious injury to ash trees in Thayer County and to elm trees in Redwillow County, during the last week in July.

BIRCH

A SAWFLY (Panusa fumila Klug.)

Connecticut R. B. Friend (August 24): This insect attacks gray and white birches and can be found on practically all of these trees, in nurseries and growing wild.

BRONZE BIRCH BORER (Agrilus annius Gory)

New York P. M. Eastman (August 2): The bronze birch borer is doing considerable damage to white-leaf birch trees planted in the residential section of Schenectady.

CHESTNUT

FALL CANKER WORM (Alsophila pomataria Harris)

North Carolina Wm. Middleton (August 6): On July 25 Mr. J. A. Beal, Assistant Entomologist, of the Bent Creek Laboratory, near Asheville, left

for Cranberry, N. C., where it was recently reported the chestnut trees have been partially or entirely defoliated by a lepidopterous larva for the past several years. The trees are said to die after the third defoliation. This has resulted in a forced cutting of the timber. A few of the chestnut oaks were also reported to have been defoliated recently. Mr. Beal found that the injury to the chestnut was due to the activities of the larvae of the fall cankerworm.

CATALPA

FOUR LINED SPHINX (Dezoteamia amynthor Hbn.)

Ohio E. W. Mendenhall (August 25): Catalpa trees at Sidney, Shelby County, are infested with the catalpa sphinx and suffering some injury.

ELM

ELM LEAF BEETLE (Galerucella ranthomalae Schr.)

Massachusetts A. I. Bourne (August 19): Mr. Macroix reports under date of July 26 that the larvae of the elm leaf beetle, are very abundant in Wareham and adjoining towns situated in southern Plymouth County and at the base of the Cape. He reports that while the damage at that time, was not showing up as bad as last year yet in certain locations in southern Plymouth County there was considerable browning of the foliage appearing.

Ohio E. W. Mendenhall (August 27): The elm leaf beetles have been quite bad in Piqua, Miami County, this summer and the second brood began to make their appearance.

Indiana J. J. Davis (August 14): The elm leaf beetle was reported on July 26 as abundant and destructive at Winona Lake.

WOOLLY APPLE APHID (Triosoma lanigerum Hausm.)

Wisconsin Frank Holten (August 15): At Elkhorn this insect is attacking elm.

Nebraska M. H. Swenk (August 16): Another pest that was much complained of during the period covered by this report (July 25-August 15) was the woolly apple aphid, Schizoneura lanigerum, on elm. These reports came chiefly from the larger towns of eastern Nebraska, west to Kearney, where the condition was especially bad.

A LACE BUG (Laminia pallida O. & D.)

Nebraska M. H. Swenk (August 15): An instance of injury to Camperdown elm leaves by the lace bug, Laminia pallida O. & D. came to our attention in Richardson County during the first week in August.

HICKORY

APPLE TREE PRUNER (Hypermallus villosus Fab.)

New York

C. R. Crosby and assistants (August 2): Hickory trees are infested and small branches strew the ground at Afton. Specimens were received.

LOCUST

GIANT SKIPPER (~~Enarevrea~~ titivrus Fab.)

Ohio

E. W. Mendenhall (August 19): This pest has been general over central and southern Ohio, where locust (Robinia) is found. They have given the leaves a brown appearance which spoiled the beauty of the trees.

LOCUST LEAF MINER (Chalepus forsalis Thunb.)

Indiana

J. J. Davis (August 14): The locust leaf miner was destructive to honey locust at Richmond according to a report received on August 7.

Maryland

Perez Simmons (July 29): Following extensive blotching of locust leaves by larval mines earlier in the season, large numbers of adults are now skeletonizing the leaves. These were first observed July 26. Most severe damage in at least 3 years in Montgomery County.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Indiana

J. J. Davis (August 14): Reports of the cottony maple scale abundance continue to reach our office. Localities include Albany, Alexandria, Anderson, Angola, Atlanta, Decatur, Greensburg, Indianapolis, La Fayette, Lebanon, Portland, Shelbyville, and Winchester.

SILVER MAPLE LEAF MITE (Phyllocoptes quadripes Shim.)

Indiana

J. J. Davis (August 14): Another report of abundance of the bladder mite gall on soft maple was received from Atlanta on July 26.

OAK

PUBESCENT OAK KERMES (Kermes pubescens Bogue)

Maryland

Perez Simmons and George W. Ellington (August 6): Several oak trees in the vicinity of Waldorf, St. Mary's County, were conspicuously damaged by the pubescent oak kermes, Kermes pubescens Bogue (Determined by Wm. Middleton).

STENOMA SP., POSSIBLY S. schlaegeri Zell.)

Maryland

Perez Simmons and George W. Ellington (August 6): Several oak

trees in the vicinity of Waldorf, St. Mary's County, conspicuously damaged by a lepidopterous defoliator, Stenoma sp., possibly S. scitellaria Zell. (determined by Carl Heinrich) were observed on this date.

A MOTM (Amorpha ferruginea Clemens))

Wisconsin E. E. Curtis (August 15): Complete defoliation of a large area of scrub oak at Cravitz.

PINE

PINE SCALE (Chionaspis pinifoliae Fitch)

Wisconsin R. A. Gallup (August 15): Said to be causing serious injury near Cable.

SPRUCE

SPRUCE GALLERPHID (Chermes abietis L.)

Wisconsin N. E. Woods (August 15): One report of injury received from Bayfield County.

SYCAMORE

SYCAMORE LEAF MINER (Phyllobonorycter felinella Hein.)

California E. O. Essig (July 31): This is a serious pest of ornamental street trees at Los Angeles, attacking European sycamore.

TAMPACK

LARCH SAWFLY (Nematus erichsonii Hartig)

Wisconsin S. B. Fracker (August 15): Fewer than during last two years, at least in northeastern Wisconsin.

HEMLOCK

HEMLOCK SPANWORM (Ellopia fiscellaria Guen.)

Wisconsin S. B. Fracker (August 15): Numbers about the same as during last year's outbreak in the hemlocks at Peninsula State Park. They ranged from one to six worms to the average 6-foot branch. Balsam fir was severely attacked also.

From 50 to 500 per cent were killed by dusting with calcium arsenate at 25 pounds per acre from an airplane. Seven hundred and fifty acres were covered.

INSECTS ATTACKING GREENHOUSE
AND ORNAMENTAL PLANTS

CANNA

A MEALYBUG (Pseudococcus maritimus Ehrh.)

California E. C. Essig (July 27): Seriously injuring plants of the roots of canna at San Diego.

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Merithronomyia hypogaea Loew)

Mississippi R. W. Harned (August 18): Specimens of the chrysanthemum gall midge were collected on July 30 on chrysanthemum plants at Tupelo.

GLADIOLUS

SALT-MARSH CATERPILLAR (Estigmene acrea Drury)

Wisconsin S. B. Fracker (August 15): Feeding on the flower stalks at Burlington.

YELLOW WOOLLY BEAR (Diacrisia virginica Fab.)

Wisconsin S. B. Fracker (August 15): Associated with Estigmene acrea in severe damage to gladiolus blossoms at Burlington.

THE MEALY PLATA (Crameris pruinosa Say)

Connecticut B. H. Walden (August 4): Hedges around about 700 houses owned by the Bridgeport Housing County, (Bridgeport) badly infested. Twigs coated with white waxy secretion. Nymphs very abundant and adults beginning to appear. Practically no injury to the hedges. More abundant as compared with an average year.

ROSES

ROSE CHAFER (Macrodactylus subaeneus Fab.)

Wisconsin S. B. Fracker (August 15): Scattering in western part of State, especially injurious at Sparta (Monroe County) and Chippewa Falls (Chippewa County).

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicidae)

- Missouri L. Haseman (August 27): During the last half of August the rains favored the breeding of one species of Culex mosquitoes and through central Missouri this species has been very annoying.
- Texas F. C. Bishopp (August 26): The yellow-fever mosquito is very abundant in Dallas.

CAT AND DOG FLEAS (Stenocephalis canis Curtis and
C. felis Bouche')

- GENERAL STATEMENT F. C. Bishopp (August 27): Cat and dog fleas continue to give annoyance in yards and households in northern Texas. Reports have also been received of flea troubles in Florida, Georgia, Nebraska, Minnesota, and other north-central States, and also from Maryland, New Jersey, Rhode Island, Connecticut, and Pennsylvania.
- Nebraska M. H. Swenk (August 16): About the normal number of complaints of the infestation of farm barns and sheds with the dog flea or the cat flea were received during the period covered by this report (July 25-August 15).

HOUSE FLY (Musca domestica L.)

- Missouri L. Haseman (August 27): During the first half of August house flies were unusually annoying but with the cooler weather of the latter part of August they have not been so numerous.

HORSES

COMMON BOWFLY (Gastrophilus intestinalis DeGeer)

- Texas F. C. Bishopp (August 27): Most horses in central western Texas show a moderate infestation of eggs of this species. Some farmers state that the flies have been present for several weeks.

THROAT BOWFLY (Gastrophilus nasalis L.)

- Texas F. C. Bishopp (August 27): All horses in this section (Central West) are infested with the eggs of the throat bot. The flies are said to have been somewhat more numerous a month ago than at the present time.

CANYON HORSE FLY (Tabanus rubescens Bellardi)

- Texas F. C. Bishopp (August 27): During August the canyon horse fly

continued to be a pest of some importance to horses and cattle in the escarpment from the plateau region of western Texas, and they also extended their area of damage to the plateau region and to some extent in the lower lands along the rivers. The occurrence of anthrax in a number of herds has been attributed to the horse flies.

CATTLE

STABLE FLY (*Stomoxys calcitrans* L.)

Missouri

L. Haseman (August 27): This pest has been less abundant than during the month of July though many stockmen have called for a formula for preparing a homemade fly spray.

Texas &
Oklahoma

F. C. Bishopp (August 27): During the period July 15 to August 15 a very severe outbreak of the stable fly occurred throughout the grain belt of northern Texas and southern Oklahoma. In the opinion of many dairymen, stockmen, and farmers, the outbreak was more severe this year than at any time since the unprecedented condition which occurred in 1912. During the height of the outbreak dairymen experienced a reduction of from 5 to 60 per cent in milk flow. Some threshing gangs discontinued operation because of their inability to keep teams hawing in the fields. Cattle on feed began to lose weight and were rushed to market, and there was a general lowered condition of all livestock in the heavily infested area. Reports of the death due to the flies either directly or indirectly through accidents were not uncommon, and included sheep, cattle, and horses.

The condition which gave rise to the outbreak of this summer were similar to those which prevailed in previous outbreaks, i.e., a large grain crop with the production of a great deal of straw, and the occurrence of an abnormal amount of rain during threshing which not only produced favorable breeding places in straw stacks, but resulted in the fermentation of grain in the shock and the breeding of flies therein.

During the last week there has been a marked subsidence in the number of flies, although they are still sufficiently abundant to cause severe annoyance.

HORN FLY (*Haematobia irritans* L.)

Missouri

L. Haseman (August 27): This pest has been less abundant than during the month of July though many stockmen have called for a formula for preparing a homemade fly spray.

Texas

F. C. Bishopp (August 27): Horn flies have been of very little importance to the livestock and dairy industries during July and August. Observations at a number of points in central, northern, western, and southwestern Texas indicate that they are rather less abundant throughout these portions of the State than is normal.

CATTLE GRUB (*Hypoderma lineatum* Devill.)

Texas F. C. Bishopp (August 27): Grubs are reported to be fairly well developed in the subcutaneous tissues of the back of the cattle in this vicinity (Crockett County). This indicates that the insects appeared in this section the latter part of July, which seems to be about the normal time for the plateau region in Texas. Grubs have not yet begun to reach the backs of animals at Stephenville nor at Dallas.

SCREW WORM (*Cochliomyia macellaria* Fab.)

Texas F. C. Bishopp (August 27): A moderate number of cases of screw worms are reported to be occurring among goats, sheep, and cattle in western and southwestern Texas. The abundance of these cases is apparently somewhat above normal for August.

CAT

BITING LOUSE OF CAT (*Trichodectes subrostratus* Nitzsch)

Nebraska M. H. Srenk (August 16): Infestation of a white Persian cat with the cat louse came to our attention at Lincoln during the first week in August.

INSECTS INFESTING HOUSES AND PREMISES

AMERICAN COCKROACH (*Periplaneta americana* L.)

Connecticut W. E. Britton (August 24): Extremely abundant in a "damp" along the Boulevard at New Haven and annoying residents and entering neighboring houses.

FLEAS (Siphonaptera)

Indiana C. R. Cleveland (August 24): A case was reported in West LaFayette and specimens of flea larvae submitted which were taken from bed clothing, supposedly that which was in use at the time. A number of cats were kept as pets in this household and it is probable that the larvae gained access to the bed clothing as a result of the animal's coming in contact with it in some way.

SILVERFISH (*Ichneumon* sp.)

Missouri L. Haseman (August 27): During the month I have answered an unusually large number of inquiries regarding these little insects, particularly among clothing and socks and in attics. There seems to be a general epidemic of the silverfish this summer.

CIGARETTE BEETLE (Lasioderma serricornis Fab.)

Missouri

L. Haseman (August 27): A small beetle and its grub which I take to be the cigar beetle has been attracting considerable attention feeding in the packing of overstuffed furniture.

S T O R E D - G R A I N I N S E C T S

CADALLE (Tenebroides mauritanicus L.)

Nebraska

M. H. Swenk (August 16): Several reports of a heavy infestation of shelled corn in storage by stored-grain pests were received during the period covered by this report (July 25-August 15). These reports chiefly involved the cadalle. It may also be observed here that the larvae of the cadalle were present, along with *Lucilia* maggots, in the crop of a chicken that had died of limber-neck disease.

GRANARY WEEVIL (Calandra granaria L.)

Nebraska

M. H. Swenk (August 16): Several reports of a heavy infestation of shelled corn in storage by stored-grain pests were received during the period covered by this report (July 25-August 15). These reports chiefly involved the common granary weevil.

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